Clean corrected claims

1. An ultrasonic longitudinal-torsion tissue dissection system comprising an

electrical generator supplying alternating electrical voltage and by connection to

a electro-mechanical transducer excited by the electrical generator, the electro-mechanical transducer [that is] joined mechanically to a

longitudinal-torsional resonator excited by the electro-mechanical transducer at a frequency for providing combined longitudinal and torsional motion in frequency synchronism, the longitudinal-torsional resonator mechanically joined to

a tip shaped for cutting of [in contact with] biological tissue.

2. The system of claim 1 where the electro-mechanical transducer is a longitudinal transducer.

3. The system of claim 1 where the electro-mechanical transducer is a torsional transducer.

4. An ultrasonic longitudinal-torsion tissue dissection system comprising an

electrical generator supplying alternating electrical voltage and current by connection to

an electro-mechanical transducer excited by the electrical generator, the electro-mechanical transducer [that is] joined mechanically to a

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longitudinal-torsional resonator excited by the electro-mechanical transducer at a frequency for providing combined longitudinal and torsional motion in frequency synchronism, the longitudinal-torsional resonator mechanically joined to
a tip shaped for cutting of [in contact with] biological tissue[.]

a source of irrigation fluid connected to

said longitudinal-torsional resonator.

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5. The system of claim 4 where the electro-mechanical transducer is a piezo longitudinal transducer.

6. The system of claim 4 where the electro-mechanical transducer is a piezo torsional transducer.

7. The system of claim 4 where said source of irrigation fluid is connected to said electro-mechanical transducer.

8. An ultrasonic longitudinal-torsion tissue dissection system comprising an

electrical generator supplying alternating electrical voltage and current by connection to

an electro-mechanical transducer excited by the electrical generator, the electro-mechanical transducer joined mechanically to a

longitudinal-torsional resonator excited by the electro-mechanical transducer at a frequency for providing combined longitudinal and torsional motion in frequency synchronism, the longitudinal-torsional resonator mechanically joined to

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a tip shaped for dissecting biological tissue,

a vacuum source connected to

said longitudinal-torsional resonator.

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9. The system of claim 8 where the electro-mechanical transducer is a longitudinal transducer.

10. The system of claim 8 where the electro-mechanical transducer is a torsional transducer.

11. The system of claim 8 where said source of irrigation fluid also provides vacuum and is connected to said electro-mechanical transducer.

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